



SEQUENCE LISTING

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RECEIVED
MAY 03 2002
TECH CENTER 1600/2900

<110> Prayaga, Sudhirdas K
Taupier Jr, Raymond J
Bandaru, Raj

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RECEPTORS, AND FIBROMODULIN, AND POLYNUCLEOTIDES
ENCODING SAME

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<400> 8
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<210> 9
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Ag190 Probe
 PCR Primer Sequence

<400> 9
 caagccacaa actgtgacgt gaacctg 27

<210> 10
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Ag190 Reverse
 PCR Primer Sequence

<400> 10
 gtggcatcag cacggagtg 19

<210> 11
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag087 Forward
 PCR Primer Sequence

 <400> 11
 cgcagtttca ctcgggagat 20

 <210> 12
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag087 Probe
 PCR Primer Sequence

 <400> 12
 cctctaggat ccacatcgag aaaatcatcg g 31

 <210> 13
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag087 Reverse
 PCR Primer Sequence

 <400> 13
 agcagacttc cccggagtct 20

 <210> 14
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV2 Forward
 PCR Primer Sequence

 <400> 14
 ggatccgcgc gcggcgaagt gaatttgctg g 31

 <210> 15
 <211> 29
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2 Reverse
 PCR Primer Sequence

<400> 15
 ctcgaggggtc ctggtgtcat agcggggcc 29

<210> 16
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2 S1 PCR
 Primer Sequence

<400> 16
 tacctggagt cggaccgc 18

<210> 17
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2 S2 PCR
 Primer Sequence

<400> 17
 gcggtccgac tccaggta 18

<210> 18
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2 S3 PCR
 Primer Sequence

<400> 18
 cagtgcgtgc ggcactcag 19

<210> 19
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2 S4 PCR
 Primer Sequence

<400> 19
tgagtgccgc acgcactgg 19

<210> 20
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV2 S5 PCR
Primer Sequence

<400> 20
ctggacccag gtggccgc 18

<210> 21
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV2 S6 PCR
Primer Sequence

<400> 21
gcggccacct ggggccag 18

<210> 22
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV2 S7 PCR
Primer Sequence

<400> 22
cccgagcagc cgaacggc 18

<210> 23
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV2 S8 PCR
Primer Sequence

<400> 23
gccgttcggc tgctcggg 18

<210> 24

<211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV3 Forward
 PCR Primer Sequence

 <400> 24
 ggatccacca cctgccctc ggtgtgc 27

 <210> 25
 <211> 35
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV3 Reverse
 PCR Primer Sequence

 <400> 25
 ctcgaggcca gcgttctgct cctggttgag tgtgg 35

 <210> 26
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV3 S1 PCR
 Primer Sequence

 <400> 26
 cgcaccattg ccagggac 18

 <210> 27
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV3 S2 PCR
 Primer Sequence

 <400> 27
 gtccttgcca atggtgcg 18

 <210> 28
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>

<223> Description of Artificial Sequence: NOV3 S3 PCR
Primer Sequence

<400> 28
ctggtgcgca attcgctggc c 21

<210> 29
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV3 S4 PCR
Primer Sequence

<400> 29
ggccagcgaa ttgcgcacca g 21

<210> 30
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV3 S5 PCR
Primer Sequence

<400> 30
cacgcctctg ccaccacg 18

<210> 31
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV3 S6 PCR
Primer Sequence

<400> 31
cgtggtggca gaggcgtg 18

<210> 32
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: pSec-V5 His
Forward Oligonucleotide Primer Sequence

<400> 32
ctcgtcctcg agggtaa gcc tatccctaac 30

<210> 33
 <211> 31
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: pSec-V5 His
 Reverse Oligonucleotide Primer Sequence

<400> 33
 ctcgtcgggc ccctgatcag cgggtttaaa c 31

<210> 34
 <211> 40
 <212> PRT
 <213> Homo sapiens

<400> 34
 Met Ala Asp Lys Pro Asp Met Gly Glu Ile Ala Ser Phe Asp Lys Ala
 1 5 10 15
 Lys Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys
 20 25 30
 Glu Thr Ile Glu Gln Glu Lys Arg
 35 40

<210> 35
 <211> 10
 <212> PRT
 <213> Homo sapiens

<400> 35
 Lys Leu Lys Lys Thr Glu Thr Gln Glu Asn
 1 5 10

<210> 36
 <211> 38
 <212> PRT
 <213> Homo sapiens

<400> 36
 Ala Asp Lys Pro Asp Met Gly Glu Ile Ala Ser Phe Asp Lys Ala Lys
 1 5 10 15
 Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys Glu
 20 25 30
 Thr Ile Glu Gln Glu Lys
 35

<210> 37
 <211> 40
 <212> PRT
 <213> Bos taurus

<400> 37
 Ala Asp Lys Pro Asp Leu Gly Glu Ile Asn Ser Phe Asp Lys Ala Lys
 1 5 10 15
 Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys Glu
 20 25 30
 Thr Ile Glu Gln Glu Lys Gln Ala
 35 40

<210> 38
 <211> 40
 <212> PRT
 <213> Sus scrofa

<400> 38
 Ala Asp Lys Pro Asp Met Gly Glu Ile Asn Ser Phe Asp Lys Ala Lys
 1 5 10 15
 Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys Glu
 20 25 30
 Thr Ile Glu Gln Glu Lys Gln Ala
 35 40

<210> 39
 <211> 40
 <212> PRT
 <213> Homo sapiens

<400> 39
 Ser Asp Lys Pro Asp Met Ala Glu Ile Glu Lys Phe Asp Lys Ser Lys
 1 5 10 15
 Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys Glu
 20 25 30
 Thr Ile Glu Gln Glu Lys Gln Ala
 35 40

<210> 40
 <211> 41
 <212> PRT
 <213> Mus musculus

<400> 40
 Met Ser Asp Lys Pro Asp Met Ala Glu Ile Glu Lys Phe Asp Lys Ser
 1 5 10 15

Lys Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys
 20 25 30

Glu Thr Ile Glu Gln Glu Lys Gln Ala
 35 40

<210> 41
 <211> 40
 <212> PRT
 <213> *Oryctolagus cuniculus*

<400> 41
 Ala Asp Lys Pro Asp Met Ala Glu Ile Glu Lys Phe Asp Lys Ser Lys
 1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys Glu
 20 25 30

Thr Ile Glu Gln Glu Lys Gln Ala
 35 40

<210> 42
 <211> 39
 <212> PRT
 <213> *Xenopus laevis*

<400> 42
 Ser Asp Lys Pro Asp Met Ala Glu Ile Glu Lys Phe Asp Lys Ala Lys
 1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys Glu
 20 25 30

Thr Ile Glu Gln Glu Lys Gln
 35

<210> 43
 <211> 40
 <212> PRT
 <213> *Homo sapiens*

<400> 43
 Ser Asp Lys Pro Gly Met Ala Glu Ile Glu Lys Phe Asp Lys Ser Lys
 1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Ser Ser Lys Glu
 20 25 30

Thr Ile Glu Gln Glu Arg Gln Ala
 35 40

<210> 44
 <211> 40

<212> PRT

<213> *Oncorhynchus mykiss*

<400> 44

Ser Asp Lys Pro Asn Leu Glu Glu Val Ala Ser Phe Asp Lys Thr Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Thr Lys Glu
20 25 30

Thr Ile Glu Gln Glu Lys Gln Ala
35 40

<210> 45

<211> 40

<212> PRT

<213> *Oncorhynchus mykiss*

<400> 45

Ser Asp Lys Pro Asp Leu Ala Glu Val Ser Asn Phe Asp Lys Thr Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Thr Lys Glu
20 25 30

Thr Ile Glu Gln Glu Lys Gln Ala
35 40

<210> 46

<211> 40

<212> PRT

<213> *Lateolabrax japonicus*

<400> 46

Ser Asp Lys Pro Asp Ile Ser Glu Val Thr Ser Phe Asp Lys Thr Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys Glu
20 25 30

Thr Ile Glu Gln Glu Lys Ala Ala
35 40

<210> 47

<211> 39

<212> PRT

<213> *Rattus norvegicus*

<400> 47

Met Ser Asp Lys Pro Asp Leu Ser Glu Val Glu Thr Phe Asp Lys Ser
1 5 10 15

Lys Leu Lys Lys Thr Asn Thr Glu Glu Lys Asn Thr Leu Pro Ser Lys
20 25 30

Glu Thr Ile Gln Gln Glu Lys
35

<210> 48
<211> 38
<212> PRT
<213> Homo sapiens

<400> 48
Ser Asp Lys Pro Asp Leu Ser Glu Val Glu Lys Phe Asp Arg Ser Lys
1 5 10 15
Leu Lys Lys Thr Asn Thr Glu Glu Lys Asn Thr Leu Pro Ser Lys Glu
20 25 30
Thr Ile Gln Gln Glu Lys
35

<210> 49
<211> 35
<212> PRT
<213> Drosophila melanogaster

<400> 49
Ile Ala Gly Ile Glu Asn Phe Asp Ala Lys Lys Leu Lys His Thr Glu
1 5 10 15
Thr Asn Glu Lys Asn Val Leu Pro Thr Lys Glu Val Ile Glu Ala Glu
20 25 30
Lys Gln Ala
35

<210> 50
<211> 31
<212> PRT
<213> Drosophila melanogaster

<400> 50
Gly Ile Thr Ala Phe Asn Gln Asn Asn Leu Lys His Thr Glu Thr Asn
1 5 10 15
Glu Lys Asn Pro Leu Pro Asp Lys Glu Ala Ile Glu Gln Glu Lys
20 25 30

<210> 51
<211> 38
<212> PRT
<213> Homo sapiens

<400> 51
Ala Asp Lys Pro Asp Met Gly Glu Ile Ala Ser Phe Asp Lys Ala Lys

1	5	10	15
Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys Glu	20	25	30
Thr Ile Glu Gln Glu Lys	35		
<210> 52			
<211> 991			
<212> PRT			
<213> Mus musculus			
<400> 52			
Met Ala Pro Ala Arg Ala Arg Leu Ser Pro Ala Leu Trp Val Val Thr	5	10	15
1			
Ala Ala Ala Ala Ala Thr Cys Val Ser Ala Gly Arg Gly Glu Val Asn	20	25	30
Leu Leu Asp Thr Ser Thr Ile His Gly Asp Trp Gly Trp Leu Thr Tyr	35	40	45
Pro Ala His Gly Trp Asp Ser Ile Asn Glu Val Asp Glu Ser Phe Arg	50	55	60
Pro Ile His Thr Tyr Gln Val Cys Asn Val Met Ser Pro Asn Gln Asn	65	70	75
Asn Trp Leu Arg Thr Asn Trp Val Pro Arg Asp Gly Ala Arg Arg Val	85	90	95
Tyr Ala Glu Ile Lys Phe Thr Leu Arg Asp Cys Asn Ser Ile Pro Gly	100	105	110
Val Leu Gly Thr Cys Lys Glu Thr Phe Asn Leu His Tyr Leu Glu Ser	115	120	125
Asp Arg Asp Leu Gly Ala Ser Thr Gln Glu Ser Gln Phe Leu Lys Ile	130	135	140
Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr Gly Ala Asp Leu Gly Val	145	150	155
Arg Arg Leu Lys Leu Asn Thr Glu Val Arg Gly Val Gly Pro Leu Ser	165	170	175
Lys Arg Gly Phe Tyr Leu Ala Phe Gln Asp Ile Gly Ala Cys Leu Ala	180	185	190
Ile Leu Ser Leu Arg Ile Tyr Tyr Lys Lys Cys Pro Ala Met Val Arg	195	200	205
Asn Leu Ala Ala Phe Ser Glu Ala Val Thr Gly Ala Asp Ser Ser Ser	210	215	220

Leu Val Glu Val Arg Gly Gln Cys Val Arg His Ser Glu Glu Arg Asp
 225 230 235 240
 Thr Pro Lys Met Tyr Cys Ser Ala Glu Gly Glu Trp Leu Val Pro Ile
 245 250 255
 Gly Lys Cys Val Cys Ser Ala Gly Tyr Glu Glu Arg Arg Asp Ala Cys
 260 265 270
 Met Ala Cys Glu Leu Gly Phe Tyr Lys Ser Ala Pro Gly Asp Gln Leu
 275 280 285
 Cys Ala Arg Cys Pro Pro His Ser His Ser Ala Thr Pro Ala Ala Gln
 290 295 300
 Thr Cys Arg Cys Asp Leu Ser Tyr Tyr Arg Ala Ala Leu Asp Pro Pro
 305 310 315 320
 Ser Ala Ala Cys Thr Arg Pro Pro Ser Ala Pro Val Asn Leu Ile Ser
 325 330 335
 Ser Val Asn Gly Thr Ser Val Thr Leu Glu Trp Ala Pro Pro Leu Asp
 340 345 350
 Pro Gly Gly Arg Ser Asp Ile Thr Tyr Asn Ala Val Cys Arg Arg Cys
 355 360 365
 Pro Trp Ala Leu Ser His Cys Glu Ala Cys Gly Ser Gly Thr Arg Phe
 370 375 380
 Val Pro Gln Gln Thr Ser Leu Ala Gln Ala Ser Leu Leu Val Ala Asn
 385 390 395 400
 Leu Leu Ala His Met Asn Tyr Ser Phe Trp Ile Glu Ala Val Asn Gly
 405 410 415
 Val Ser Asn Leu Ser Pro Glu Pro Arg Ser Ala Ala Val Val Asn Ile
 420 425 430
 Thr Thr Asn Gln Ala Ala Pro Ser Gln Val Val Val Ile Arg Gln Glu
 435 440 445
 Arg Ala Gly Gln Thr Ser Val Ser Leu Leu Trp Gln Glu Pro Glu Gln
 450 455 460
 Pro Asn Gly Ile Ile Leu Glu Tyr Glu Ile Lys Tyr Tyr Glu Lys Asp
 465 470 475 480
 Lys Glu Met Gln Ser Tyr Ser Thr Leu Lys Ala Val Thr Thr Arg Ala
 485 490 495
 Thr Val Ser Gly Leu Lys Pro Gly Thr Arg Tyr Val Phe Gln Val Arg
 500 505 510
 Ala Arg Thr Ser Ala Gly Cys Gly Arg Phe Ser Gln Ala Met Glu Val
 515 520 525

Glu Thr Gly Lys Pro Arg Pro Arg Tyr Asp Thr Arg Thr Ile Val Trp
 530 535 540
 Ile Cys Leu Thr Leu Ile Thr Gly Leu Val Val Leu Leu Leu Leu Leu
 545 550 555 560
 Ile Cys Lys Lys Arg His Cys Gly Tyr Ser Lys Ala Phe Gln Asp Ser
 565 570 575
 Asp Glu Glu Lys Met His Tyr Gln Asn Gly Gln Ala Pro Pro Pro Val
 580 585 590
 Phe Leu Pro Leu Asn His Pro Pro Gly Lys Phe Pro Glu Thr Gln Phe
 595 600 605
 Ser Ala Glu Pro His Thr Tyr Glu Glu Pro Gly Arg Ala Gly Arg Ser
 610 615 620
 Phe Thr Arg Glu Ile Glu Ala Ser Arg Ile His Ile Glu Lys Ile Ile
 625 630 635 640
 Gly Ser Gly Glu Ser Gly Glu Val Cys Tyr Gly Arg Leu Gln Val Pro
 645 650 655
 Gly Gln Arg Asp Val Pro Val Ala Ile Lys Ala Leu Lys Ala Gly Tyr
 660 665 670
 Thr Glu Arg Gln Arg Gln Asp Phe Leu Ser Glu Ala Ala Ile Met Gly
 675 680 685
 Gln Phe Asp His Pro Asn Ile Ile Arg Leu Glu Gly Val Val Thr Arg
 690 695 700
 Gly Arg Leu Ala Met Ile Val Thr Glu Tyr Met Glu Asn Gly Ser Leu
 705 710 715 720
 Asp Ala Phe Leu Arg Thr His Asp Gly Gln Phe Thr Ile Val Gln Leu
 725 730 735
 Val Gly Met Leu Arg Gly Val Gly Ala Gly Met Arg Tyr Leu Ser Asp
 740 745 750
 Leu Gly Tyr Ile His Arg Asp Leu Ala Ala Arg Asn Val Leu Val Asp
 755 760 765
 Gly Arg Leu Val Cys Lys Val Ser Asp Phe Gly Leu Ser Arg Ala Leu
 770 775 780
 Glu Asp Asp Pro Glu Ala Ala Tyr Thr Thr Ala Gly Gly Lys Ile Pro
 785 790 795 800
 Ile Arg Trp Thr Ala Pro Glu Ala Ile Ala Phe Arg Thr Phe Ser Ser
 805 810 815
 Ala Ser Asp Val Trp Ser Phe Gly Val Val Met Trp Glu Val Leu Ala
 820 825 830

Tyr Gly Glu Arg Pro Tyr Trp Asn Met Thr Asn Gln Asp Val Ile Ser
 835 840 845
 Ser Val Glu Glu Gly Tyr Arg Leu Pro Ala Pro Met Gly Cys Pro Arg
 850 855 860
 Ala Leu His Gln Leu Met Leu Asp Cys Trp His Lys Asp Arg Ala Gln
 865 870 875 880
 Arg Pro Arg Phe Ala His Val Val Ser Val Leu Asp Ala Leu Val His
 885 890 895
 Ser Pro Glu Ser Leu Arg Ala Thr Ala Thr Val Ser Arg Cys Pro Pro
 900 905 910
 Pro Ala Phe Ala Arg Ser Cys Phe Asp Leu Arg Ala Gly Gly Ser Gly
 915 920 925
 Asn Gly Asp Leu Thr Val Gly Asp Trp Leu Asp Ser Ile Arg Met Gly
 930 935 940
 Arg Tyr Arg Asp His Phe Ala Ala Gly Gly Tyr Ser Ser Leu Gly Met
 945 950 955 960
 Val Leu Arg Met Asn Ala Gln Asp Val Arg Ala Leu Gly Ile Thr Leu
 965 970 975
 Met Gly His Gln Lys Lys Ile Leu Gly Ser Ile Gln Thr Met Arg
 980 985 990

<210> 53
 <211> 992
 <212> PRT
 <213> Homo sapiens

<400> 53
 Met Ala Pro Ala Arg Gly Arg Leu Pro Pro Ala Leu Trp Val Val Thr
 1 5 10 15
 Ala Ala Ala Ala Ala Thr Cys Val Ser Ala Ala Arg Gly Glu Val
 20 25 30
 Asn Leu Leu Asp Thr Ser Thr Ile His Gly Asp Trp Gly Trp Leu Thr
 35 40 45
 Tyr Pro Ala His Gly Trp Asp Ser Ile Asn Glu Val Asp Glu Ser Phe
 50 55 60
 Gln Pro Ile His Thr Tyr Gln Val Cys Asn Val Met Ser Pro Asn Gln
 65 70 75 80
 Asn Asn Trp Leu Arg Thr Ser Trp Val Pro Arg Asp Gly Ala Arg Arg
 85 90 95
 Val Tyr Ala Glu Ile Lys Phe Thr Leu Arg Asp Cys Asn Ser Met Pro
 100 105 110

Gly Val Leu Gly Thr Cys Lys Glu Thr Phe Asn Leu Tyr Tyr Leu Glu
 115 120 125
 Ser Asp Arg Asp Leu Gly Ala Ser Thr Gln Glu Ser Gln Phe Leu Lys
 130 135 140
 Ile Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr Gly Ala Asp Leu Gly
 145 150 155 160
 Val Arg Arg Leu Lys Leu Asn Thr Glu Val Arg Ser Val Gly Pro Leu
 165 170 175
 Ser Lys Arg Gly Phe Tyr Leu Ala Phe Gln Asp Ile Gly Ala Cys Leu
 180 185 190
 Ala Ile Leu Ser Leu Arg Ile Tyr Tyr Lys Lys Cys Pro Ala Met Val
 195 200 205
 Arg Asn Leu Ala Ala Phe Ser Glu Ala Val Thr Gly Ala Asp Ser Ser
 210 215 220
 Ser Leu Val Glu Val Arg Gly Gln Cys Val Arg His Ser Glu Glu Arg
 225 230 235 240
 Asp Thr Pro Lys Met Tyr Cys Ser Ala Glu Gly Glu Trp Leu Val Pro
 245 250 255
 Ile Gly Lys Cys Val Cys Ser Ala Gly Tyr Glu Glu Arg Arg Asp Ala
 260 265 270
 Cys Val Ala Cys Glu Leu Gly Phe Tyr Lys Ser Ala Pro Gly Asp Gln
 275 280 285
 Leu Cys Ala Arg Cys Pro Pro His Ser His Ser Ala Ala Pro Ala Ala
 290 295 300
 Gln Ala Cys His Cys Asp Leu Ser Tyr Tyr Arg Ala Ala Leu Asp Pro
 305 310 315 320
 Pro Ser Ser Ala Cys Thr Arg Pro Pro Ser Ala Pro Val Asn Leu Ile
 325 330 335
 Ser Ser Val Asn Gly Thr Ser Val Thr Leu Glu Trp Ala Pro Pro Leu
 340 345 350
 Asp Pro Gly Gly Arg Ser Asp Ile Thr Tyr Asn Ala Val Cys Arg Arg
 355 360 365
 Cys Pro Trp Ala Leu Ser Arg Cys Glu Ala Cys Gly Ser Gly Thr Arg
 370 375 380
 Phe Val Pro Gln Gln Thr Ser Leu Val Gln Ala Ser Leu Leu Val Ala
 385 390 395 400
 Asn Leu Leu Ala His Met Asn Tyr Ser Phe Trp Ile Glu Ala Val Asn
 405 410 415

<210> 54

<211> 450

<212> PRT

<213> Mus musculus

<400> 54

Met	Ala	Pro	Ala	Arg	Ala	Arg	Leu	Ser	Pro	Ala	Leu	Trp	Val	Val	Thr	
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Ala	Ala	Ala	Ala	Ala	Thr	Cys	Val	Ser	Ala	Gly	Arg	Gly	Glu	Val	Asn	
			20					25					30			
Leu	Leu	Asp	Thr	Ser	Thr	Ile	His	Gly	Asp	Trp	Gly	Trp	Leu	Thr	Tyr	
		35					40					45				
Pro	Ala	His	Gly	Trp	Asp	Ser	Ile	Asn	Glu	Val	Asp	Glu	Ser	Phe	Arg	
	50					55					60					
Pro	Ile	His	Thr	Tyr	Gln	Val	Cys	Asn	Val	Met	Ser	Pro	Asn	Gln	Asn	
65					70					75					80	
Asn	Trp	Leu	Arg	Thr	Asn	Trp	Val	Pro	Arg	Asp	Gly	Ala	Arg	Arg	Val	
				85					90					95		
Tyr	Ala	Glu	Ile	Lys	Phe	Thr	Leu	Arg	Asp	Cys	Asn	Ser	Ile	Pro	Gly	
			100					105					110			
Val	Leu	Gly	Thr	Cys	Lys	Glu	Thr	Phe	Asn	Leu	His	Tyr	Leu	Glu	Ser	
		115					120					125				
Asp	Arg	Asp	Leu	Gly	Ala	Ser	Thr	Gln	Glu	Ser	Gln	Phe	Leu	Lys	Ile	
		130				135					140					
Asp	Thr	Ile	Ala	Ala	Asp	Glu	Ser	Phe	Thr	Gly	Ala	Asp	Leu	Gly	Val	
145					150					155					160	
Arg	Arg	Leu	Lys	Leu	Asn	Thr	Glu	Val	Arg	Gly	Val	Gly	Pro	Leu	Ser	
				165					170					175		
Lys	Arg	Gly	Phe	Tyr	Leu	Ala	Phe	Gln	Asp	Ile	Gly	Ala	Cys	Leu	Ala	
			180					185					190			
Ile	Leu	Ser	Leu	Arg	Ile	Tyr	Tyr	Lys	Lys	Cys	Pro	Ala	Met	Val	Arg	
		195					200					205				
Asn	Leu	Ala	Ala	Phe	Ser	Glu	Ala	Val	Thr	Gly	Ala	Asp	Ser	Ser	Ser	
		210				215					220					
Leu	Val	Glu	Val	Arg	Gly	Gln	Cys	Val	Arg	His	Ser	Glu	Glu	Arg	Asp	
225					230					235					240	
Thr	Pro	Lys	Met	Tyr	Cys	Ser	Ala	Glu	Gly	Glu	Trp	Leu	Val	Pro	Ile	
				245					250					255		
Gly	Lys	Cys	Val	Cys	Ser	Ala	Gly	Tyr	Glu	Glu	Arg	Arg	Asp	Ala	Cys	
			260					265					270			
Met	Ala	Cys	Glu	Leu	Gly	Phe	Tyr	Lys	Ser	Ala	Pro	Gly	Asp	Gln	Leu	

275	280	285
Cys Ala Arg Cys Pro Pro His Ser His Ser Ala Thr Pro Ala Ala Gln		
290	295	300
Thr Cys Arg Cys Asp Leu Ser Tyr Tyr Arg Ala Ala Leu Asp Pro Pro		
305	310	315
Ser Ala Ala Cys Thr Arg Pro Pro Ser Ala Pro Val Asn Leu Ile Ser		
325	330	335
Ser Val Asn Gly Thr Ser Val Thr Leu Glu Trp Ala Pro Pro Leu Asp		
340	345	350
Pro Gly Gly Arg Ser Asp Ile Thr Tyr Asn Ala Val Cys Arg Arg Cys		
355	360	365
Pro Trp Ala Leu Ser His Cys Glu Ala Cys Gly Ser Gly Thr Arg Phe		
370	375	380
Val Pro Gln Gln Thr Ser Leu Ala Gln Ala Ser Leu Leu Val Ala Asn		
385	390	395
Leu Leu Ala His Met Asn Tyr Ser Phe Trp Ile Glu Ala Val Asn Gly		
405	410	415
Val Ser Asn Leu Ser Pro Glu Pro Arg Ser Ala Ala Val Val Asn Ile		
420	425	430
Thr Thr Asn Gln Ala Ala Pro Ser Gln Val Val Val Ile Arg Gln Glu		
435	440	445
Arg Ala		
450		

<210> 55

<211> 480

<212> PRT

<213> Homo sapiens

<400> 55

Met Arg Gly Ser Gly Pro Arg Gly Ala Gly His Arg Arg Pro Pro Ser
1 5 10 15

Gly Gly Gly Asp Thr Pro Ile Thr Pro Ala Ser Leu Ala Gly Cys Tyr
20 25 30

Ser Ala Pro Arg Arg Ala Pro Leu Trp Thr Cys Leu Leu Cys Ala
35 40 45

Ala Leu Arg Thr Leu Leu Ala Ser Pro Ser Asn Glu Val Asn Leu Leu
50 55 60

Asp Ser Arg Thr Val Met Gly Asp Leu Gly Trp Ile Ala Phe Pro Lys
65 70 75 80

Gly Arg Lys Asp Val Ser Tyr Tyr Ile Ala Cys Lys Lys Cys Asn Ser
 385 390 395 400
 His Ala Gly Val Cys Glu Glu Cys Gly Gly His Val Arg Tyr Leu Pro
 405 410 415
 Arg Gln Ser Gly Leu Lys Asn Thr Ser Val Met Met Val Asp Leu Leu
 420 425 430
 Ala His Thr Asn Tyr Thr Phe Glu Ile Glu Ala Val Asn Gly Val Ser
 435 440 445
 Asp Leu Ser Pro Gly Ala Arg Gln Tyr Val Ser Val Asn Val Thr Thr
 450 455 460
 Asn Gln Ala Ala Pro Ser Pro Val Thr Asn Val Lys Lys Gly Lys Ile
 465 470 475 480

<210> 56
 <211> 456
 <212> PRT
 <213> Gallus gallus

<400> 56
 Met Gly Leu Arg Gly Gly Gly Gly Arg Ala Gly Gly Pro Ala Pro Gly
 1 5 10 15
 Trp Thr Cys Leu Leu Leu Cys Ala Ala Leu Arg Ser Leu Leu Ala Ser
 20 25 30
 Pro Gly Ser Glu Val Asn Leu Leu Asp Ser Arg Thr Val Met Gly Asp
 35 40 45
 Leu Gly Trp Ile Ala Tyr Pro Lys Asn Gly Trp Glu Glu Ile Gly Glu
 50 55 60
 Val Asp Glu Asn Tyr Ala Pro Ile His Thr Tyr Gln Val Cys Lys Val
 65 70 75 80
 Met Glu Gln Asn Gln Asn Asn Trp Leu Leu Thr Ser Trp Ile Ser Asn
 85 90 95
 Glu Gly Arg Pro Ala Ser Ser Phe Glu Leu Lys Phe Thr Leu Arg Asp
 100 105 110
 Cys Asn Ser Leu Pro Gly Gly Leu Gly Thr Cys Lys Glu Thr Phe Asn
 115 120 125
 Met Tyr Tyr Phe Glu Ser Asp Asp Glu Asp Gly Arg Asn Ile Arg Glu
 130 135 140
 Asn Gln Tyr Ile Lys Ile Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr
 145 150 155 160

Glu Leu Asp Leu Gly Asp Arg Val Met Lys Leu Asn Thr Glu Val Arg
 165 170 175
 Asp Val Gly Pro Leu Thr Lys Lys Gly Phe Tyr Leu Ala Phe Gln Asp
 180 185 190
 Val Gly Ala Cys Ile Ala Leu Val Ser Val Arg Val Tyr Tyr Lys Lys
 195 200 205
 Cys Pro Ser Val Ile Arg Asn Leu Ala Arg Phe Pro Asp Thr Ile Thr
 210 215 220
 Gly Ala Asp Ser Ser Gln Leu Leu Glu Val Ser Gly Val Cys Val Asn
 225 230 235 240
 His Ser Val Thr Asp Glu Ala Pro Lys Met His Cys Ser Ala Glu Gly
 245 250 255
 Glu Trp Leu Val Pro Ile Gly Lys Cys Leu Cys Lys Ala Gly Tyr Glu
 260 265 270
 Glu Lys Asn Asn Thr Cys Gln Val Cys Arg Pro Gly Phe Phe Lys Ala
 275 280 285
 Ser Pro His Ser Pro Ser Cys Ser Lys Cys Pro Pro His Ser Tyr Thr
 290 295 300
 Leu Asp Glu Ala Ser Thr Ser Cys Leu Cys Glu Glu His Tyr Phe Arg
 305 310 315 320
 Arg Glu Ser Asp Pro Pro Thr Met Ala Cys Thr Arg Pro Pro Ser Ala
 325 330 335
 Pro Arg Ser Ala Ile Ser Asn Val Asn Glu Thr Ser Val Phe Leu Glu
 340 345 350
 Trp Ile Pro Pro Ala Asp Thr Gly Gly Arg Lys Asp Val Ser Tyr Tyr
 355 360 365
 Ile Ala Cys Lys Lys Cys Asn Ser His Ser Gly Leu Cys Glu Ala Cys
 370 375 380
 Gly Ser His Val Arg Tyr Leu Pro Gln Gln Thr Gly Leu Lys Asn Thr
 385 390 395 400
 Ser Val Met Met Val Asp Leu Leu Ala His Thr Asn Tyr Thr Phe Glu
 405 410 415
 Ile Glu Ala Val Asn Gly Val Ser Asp Gln Asn Pro Gly Ala Arg Gln
 420 425 430
 Phe Val Ser Val Asn Val Thr Thr Asn Gln Ala Ala Pro Ser Pro Val
 435 440 445
 Ser Ser Val Lys Lys Gly Lys Ile
 450 455

<210> 57
 <211> 649
 <212> PRT
 <213> Homo sapiens

<400> 57
 Met Ile Ser Ala Ala Trp Ser Ile Phe Leu Ile Gly Thr Lys Ile Gly
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 Leu Phe Leu Gln Val Ala Pro Leu Ser Val Met Ala Lys Ser Cys Pro
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 Ser Val Cys Arg Cys Asp Ala Gly Phe Ile Tyr Cys Asn Asp Arg Phe
 35 40 45
 Leu Thr Ser Ile Pro Thr Gly Ile Pro Glu Asp Ala Thr Thr Leu Tyr
 50 55 60
 Leu Gln Asn Asn Gln Ile Asn Asn Ala Gly Ile Pro Ser Asp Leu Lys
 65 70 75 80
 Asn Leu Leu Lys Val Glu Arg Ile Tyr Leu Tyr His Asn Ser Leu Asp
 85 90 95
 Glu Phe Pro Thr Asn Leu Pro Lys Tyr Val Lys Glu Leu His Leu Gln
 100 105 110
 Glu Asn Asn Ile Arg Thr Ile Thr Tyr Asp Ser Leu Ser Lys Ile Pro
 115 120 125
 Tyr Leu Glu Glu Leu His Leu Asp Asp Asn Ser Val Ser Ala Val Ser
 130 135 140
 Ile Glu Glu Gly Ala Phe Arg Asp Ser Asn Tyr Leu Arg Leu Leu Phe
 145 150 155 160
 Leu Ser Arg Asn His Leu Ser Thr Ile Pro Trp Gly Leu Pro Arg Thr
 165 170 175
 Ile Glu Glu Leu Arg Leu Asp Asp Asn Arg Ile Ser Thr Ile Ser Ser
 180 185 190
 Pro Ser Leu Gln Gly Leu Thr Ser Leu Lys Arg Leu Val Leu Asp Gly
 195 200 205
 Asn Leu Leu Asn Asn His Gly Leu Gly Asp Lys Val Phe Phe Asn Leu
 210 215 220
 Val Asn Leu Thr Glu Leu Ser Leu Val Arg Asn Ser Leu Thr Ala Ala
 225 230 235 240
 Pro Val Asn Leu Pro Gly Thr Asn Leu Arg Lys Leu Tyr Leu Gln Asp
 245 250 255
 Asn His Ile Asn Arg Val Pro Pro Asn Ala Phe Ser Tyr Leu Arg Gln

260										265					270				
Leu	Tyr	Arg	Leu	Asp	Met	Ser	Asn	Asn	Asn	Leu	Ser	Asn	Leu	Pro	Gln				
		275					280					285							
Gly	Ile	Phe	Asp	Asp	Leu	Asp	Asn	Ile	Thr	Gln	Leu	Ile	Leu	Arg	Asn				
	290					295					300								
Asn	Pro	Trp	Tyr	Cys	Gly	Cys	Lys	Met	Lys	Trp	Val	Arg	Asp	Trp	Leu				
305					310					315					320				
Gln	Ser	Leu	Pro	Val	Lys	Val	Asn	Val	Arg	Gly	Leu	Met	Cys	Gln	Ala				
				325					330					335					
Pro	Glu	Lys	Val	Arg	Gly	Met	Ala	Ile	Lys	Asp	Leu	Asn	Ala	Glu	Leu				
			340					345					350						
Phe	Asp	Cys	Lys	Asp	Ser	Gly	Ile	Val	Ser	Thr	Ile	Gln	Ile	Thr	Thr				
	355					360						365							
Ala	Ile	Pro	Asn	Thr	Val	Tyr	Pro	Ala	Gln	Gly	Gln	Trp	Pro	Ala	Pro				
	370					375					380								
Val	Thr	Lys	Gln	Pro	Asp	Ile	Lys	Asn	Pro	Lys	Leu	Thr	Lys	Asp	His				
385					390					395					400				
Gln	Thr	Thr	Gly	Ser	Pro	Ser	Arg	Lys	Thr	Ile	Thr	Ile	Thr	Val	Lys				
			405					410						415					
Ser	Val	Thr	Ser	Asp	Thr	Ile	His	Ile	Ser	Trp	Lys	Leu	Ala	Leu	Pro				
			420					425					430						
Met	Thr	Ala	Leu	Arg	Leu	Ser	Trp	Leu	Lys	Leu	Gly	His	Ser	Pro	Ala				
	435					440					445								
Phe	Gly	Ser	Ile	Thr	Glu	Thr	Ile	Val	Thr	Gly	Glu	Arg	Ser	Glu	Tyr				
	450					455					460								
Leu	Val	Thr	Ala	Leu	Glu	Pro	Asp	Ser	Pro	Tyr	Lys	Val	Cys	Met	Val				
465					470					475					480				
Pro	Met	Glu	Thr	Ser	Asn	Leu	Tyr	Leu	Phe	Asp	Glu	Thr	Pro	Val	Cys				
				485				490						495					
Ile	Glu	Thr	Glu	Thr	Ala	Pro	Leu	Arg	Met	Tyr	Asn	Pro	Thr	Thr	Thr				
			500					505					510						
Leu	Asn	Arg	Glu	Gln	Glu	Lys	Glu	Pro	Tyr	Lys	Asn	Pro	Asn	Leu	Pro				
	515						520					525							
Leu	Ala	Ala	Ile	Ile	Gly	Gly	Ala	Val	Ala	Leu	Val	Thr	Ile	Ala	Leu				
	530					535					540								
Leu	Ala	Leu	Val	Cys	Trp	Tyr	Val	His	Arg	Asn	Gly	Ser	Leu	Phe	Ser				
545					550					555					560				
Arg	Asn	Cys	Ala	Tyr	Ser	Lys	Gly	Arg	Arg	Arg	Lys	Asp	Asp	Tyr	Ala				

Gly	Leu	Pro	Val	Asp	Leu	Gln	Glu	Leu	Arg	Val	Asp	Glu	Asn	Arg	Ile	180	185	190
Ala	Val	Ile	Ser	Asp	Met	Ala	Phe	Gln	Asn	Leu	Thr	Ser	Leu	Glu	Arg	195	200	205
Leu	Ile	Val	Asp	Gly	Asn	Leu	Leu	Thr	Asn	Lys	Gly	Ile	Ala	Glu	Gly	210	215	220
Thr	Phe	Ser	His	Leu	Thr	Lys	Leu	Lys	Glu	Phe	Ser	Ile	Val	Arg	Asn	225	230	235
Ser	Leu	Ser	His	Pro	Pro	Pro	Asp	Leu	Pro	Gly	Thr	His	Leu	Ile	Arg	245	250	255
Leu	Tyr	Leu	Gln	Asp	Asn	Gln	Ile	Asn	His	Ile	Pro	Leu	Thr	Ala	Phe	260	265	270
Ser	Asn	Leu	Arg	Lys	Leu	Glu	Arg	Leu	Asp	Ile	Ser	Asn	Asn	Gln	Leu	275	280	285
Arg	Met	Leu	Thr	Gln	Gly	Val	Phe	Asp	Asn	Leu	Ser	Asn	Leu	Lys	Gln	290	295	300
Leu	Thr	Ala	Arg	Asn	Asn	Pro	Trp	Phe	Cys	Asp	Cys	Ser	Ile	Lys	Trp	305	310	315
Val	Thr	Glu	Trp	Leu	Lys	Tyr	Ile	Pro	Ser	Ser	Leu	Asn	Val	Arg	Gly	325	330	335
Phe	Met	Cys	Gln	Gly	Pro	Glu	Gln	Val	Arg	Gly	Met	Ala	Val	Arg	Glu	340	345	350
Leu	Asn	Met	Asn	Leu	Leu	Ser	Cys	Pro	Thr	Thr	Thr	Pro	Gly	Leu	Pro	355	360	365
Leu	Phe	Thr	Pro	Ala	Pro	Ser	Thr	Ala	Ser	Pro	Thr	Thr	Gln	Pro	Pro	370	375	380
Thr	Leu	Ser	Ile	Pro	Asn	Pro	Ser	Arg	Ser	Tyr	Thr	Pro	Pro	Thr	Pro	385	390	395
Thr	Thr	Ser	Lys	Leu	Pro	Thr	Ile	Pro	Asp	Trp	Asp	Gly	Arg	Glu	Arg	405	410	415
Val	Thr	Pro	Pro	Ile	Ser	Glu	Arg	Ile	Gln	Leu	Ser	Ile	His	Phe	Val	420	425	430
Asn	Asp	Thr	Ser	Ile	Gln	Val	Ser	Trp	Leu	Ser	Leu	Phe	Thr	Val	Met	435	440	445
Ala	Tyr	Lys	Leu	Thr	Trp	Val	Lys	Met	Gly	His	Ser	Leu	Val	Gly	Gly	450	455	460
Ile	Val	Gln	Glu	Arg	Ile	Val	Ser	Gly	Glu	Lys	Gln	His	Leu	Ser	Leu	465	470	475

Val Asn Leu Glu Pro Arg Ser Thr Tyr Arg Ile Cys Leu Val Pro Leu
 485 490 495
 Asp Ala Phe Asn Tyr Arg Ala Val Glu Asp Thr Ile Cys Ser Glu Ala
 500 505 510
 Thr Thr His Ala Ser Tyr Leu Asn Asn Gly Ser Asn Thr Ala Ser Ser
 515 520 525
 His Glu Gln Thr Thr Ser His Ser Met Gly Ser Pro Phe Leu Leu Ala
 530 535 540
 Gly Leu Ile Gly Gly Ala Val Ile Phe Val Leu Val Val Leu Leu Ser
 545 550 555 560
 Val Phe Cys Trp His Met His Lys Lys Gly Arg Tyr Thr Ser Gln Lys
 565 570 575
 Trp Lys Tyr Asn Arg Gly Arg Arg Lys Asp Asp Tyr Cys Glu Ala Gly
 580 585 590
 Thr Lys Lys Asp Asn Ser Ile Leu Glu Met Thr Glu Thr Ser Phe Gln
 595 600 605
 Ile Val Ser Leu Asn Asn Asp Gln Leu Leu Lys Gly Asp Phe Arg Leu
 610 615 620
 Gln Pro Ile Tyr Thr Pro Asn Gly Gly Ile Asn Tyr Thr Asp Cys His
 625 630 635 640
 Ile Pro Asn Asn Met Arg Tyr Cys Asn Ser Ser Val Pro Asp Leu Glu
 645 650 655
 His Cys His Thr
 660

<210> 59
 <211> 674
 <212> PRT
 <213> Homo sapiens

<400> 59
 Met Val Val Ala His Pro Thr Ala Thr Ala Thr Thr Thr Pro Thr Ala
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 Thr Val Thr Ala Thr Val Val Met Thr Thr Ala Thr Met Asp Leu Arg
 20 25 30
 Asp Trp Leu Phe Leu Cys Tyr Gly Leu Ile Ala Phe Leu Thr Glu Val
 35 40 45
 Ile Asp Ser Thr Thr Cys Pro Ser Val Cys Arg Cys Asp Asn Gly Phe
 50 55 60
 Ile Tyr Cys Asn Asp Arg Gly Leu Thr Ser Ile Pro Ala Asp Ile Pro
 65 70 75 80

Asp Asp Ala Thr Thr Leu Tyr Leu Gln Asn Asn Gln Ile Asn Asn Ala
 85 90 95
 Gly Ile Pro Gln Asp Leu Lys Thr Lys Val Asn Val Gln Val Ile Tyr
 100 105 110
 Leu Tyr Glu Asn Asp Leu Asp Glu Phe Pro Ile Asn Leu Pro Arg Ser
 115 120 125
 Leu Arg Glu Leu His Leu Gln Asp Asn Asn Val Arg Thr Ile Ala Arg
 130 135 140
 Asp Ser Leu Ala Arg Ile Pro Leu Leu Glu Lys Leu His Leu Asp Asp
 145 150 155 160
 Asn Ser Val Ser Thr Val Ser Ile Glu Glu Asp Ala Phe Ala Asp Ser
 165 170 175
 Lys Gln Leu Lys Leu Leu Phe Leu Ser Arg Asn His Leu Ser Ser Ile
 180 185 190
 Pro Ser Gly Leu Pro His Thr Leu Glu Glu Leu Arg Leu Asp Asp Asn
 195 200 205
 Arg Ile Ser Thr Ile Pro Leu His Ala Phe Lys Gly Leu Asn Ser Leu
 210 215 220
 Arg Arg Leu Val Leu Asp Gly Asn Leu Leu Ala Asn Gln Arg Ile Ala
 225 230 235 240
 Asp Asp Thr Phe Ser Arg Leu Gln Asn Leu Thr Glu Leu Ser Leu Val
 245 250 255
 Arg Asn Ser Leu Ala Ala Pro Pro Leu Asn Leu Pro Ser Ala His Leu
 260 265 270
 Gln Lys Leu Tyr Leu Gln Asp Asn Ala Ile Ser His Ile Pro Tyr Asn
 275 280 285
 Thr Leu Ala Lys Met Arg Glu Leu Glu Arg Leu Asp Leu Ser Asn Asn
 290 295 300
 Asn Leu Thr Thr Leu Pro Arg Gly Leu Phe Asp Asp Leu Gly Asn Leu
 305 310 315 320
 Ala Gln Leu Leu Leu Arg Asn Asn Pro Trp Phe Cys Gly Cys Asn Leu
 325 330 335
 Met Trp Leu Arg Asp Trp Val Lys Ala Arg Ala Ala Val Val Asn Val
 340 345 350
 Arg Gly Leu Met Cys Gln Gly Pro Glu Lys Val Arg Gly Met Ala Ile
 355 360 365
 Lys Asp Ile Thr Ser Glu Met Asp Glu Cys Phe Glu Thr Gly Pro Gln
 370 375 380

Gly Gly Val Ala Asn Ala Ala Ala Lys Thr Thr Ala Ser Asn His Ala
 385 390 395 400
 Ser Ala Thr Thr Pro Gln Gly Ser Leu Phe Thr Leu Lys Ala Lys Arg
 405 410 415
 Pro Gly Leu Arg Leu Pro Asp Ser Asn Ile Asp Tyr Pro Met Ala Thr
 420 425 430
 Gly Asp Gly Ala Lys Thr Leu Ala Ile His Val Lys Ala Leu Thr Ala
 435 440 445
 Asp Ser Ile Arg Ile Thr Trp Lys Ala Thr Leu Pro Ala Ser Ser Phe
 450 455 460
 Arg Leu Ser Trp Leu Arg Leu Gly His Ser Pro Ala Val Gly Ser Ile
 465 470 475 480
 Thr Glu Thr Leu Val Gln Gly Asp Lys Thr Glu Tyr Leu Leu Thr Ala
 485 490 495
 Leu Glu Pro Lys Ser Thr Tyr Ile Ile Cys Met Val Thr Met Glu Thr
 500 505 510
 Ser Asn Ala Tyr Val Ala Asp Glu Thr Pro Val Cys Ala Lys Ala Glu
 515 520 525
 Thr Ala Asp Ser Tyr Gly Pro Thr Thr Thr Leu Asn Gln Glu Gln Asn
 530 535 540
 Ala Gly Pro Met Ala Ser Leu Pro Leu Ala Gly Ile Ile Gly Gly Ala
 545 550 555 560
 Val Ala Leu Val Phe Leu Phe Leu Val Leu Gly Ala Ile Cys Trp Tyr
 565 570 575
 Val His Gln Ala Gly Glu Leu Leu Thr Arg Glu Arg Ala Tyr Asn Arg
 580 585 590
 Gly Ser Arg Glu Lys Asp Asp Tyr Met Glu Ser Gly Thr Lys Lys Asp
 595 600 605
 Asn Ser Ile Leu Glu Ile Arg Gly Pro Gly Leu Gln Met Leu Pro Ile
 610 615 620
 Asn Pro Tyr Arg Ala Lys Glu Glu Tyr Val Val His Thr Ile Phe Pro
 625 630 635 640
 Ser Asn Gly Ser Ser Leu Cys Lys Ala Thr His Thr Ile Gly Tyr Gly
 645 650 655
 Thr Thr Arg Gly Tyr Arg Asp Gly Gly Ile Pro Asp Ile Asp Tyr Ser
 660 665 670
 Tyr Thr

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<210> 60
<211> 674
<212> PRT
<213> Homo sapiens
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<400>	60														
Met	Val	Val	Ala	His	Pro	Thr	Ala	Thr	Ala	Thr	Thr	Thr	Pro	Thr	Ala
1				5					10					15	
Thr	Val	Thr	Ala	Thr	Val	Val	Met	Thr	Thr	Ala	Thr	Met	Asp	Leu	Arg
			20					25					30		
Asp	Trp	Leu	Phe	Leu	Cys	Tyr	Gly	Leu	Ile	Ala	Phe	Leu	Thr	Glu	Val
		35					40					45			
Ile	Asp	Ser	Thr	Thr	Cys	Pro	Ser	Val	Cys	Arg	Cys	Asp	Asn	Gly	Phe
	50					55					60				
Ile	Tyr	Cys	Asn	Asp	Arg	Gly	Leu	Thr	Ser	Ile	Pro	Ala	Asp	Ile	Pro
65					70					75					80
Asp	Asp	Ala	Thr	Thr	Leu	Tyr	Leu	Gln	Asn	Asn	Gln	Ile	Asn	Asn	Ala
				85					90					95	
Gly	Ile	Pro	Gln	Asp	Leu	Lys	Thr	Lys	Val	Asn	Val	Gln	Val	Ile	Tyr
			100					105					110		
Leu	Tyr	Glu	Asn	Asp	Leu	Asp	Glu	Phe	Pro	Ile	Asn	Leu	Pro	Arg	Ser
		115					120					125			
Leu	Arg	Glu	Leu	His	Leu	Gln	Asp	Asn	Asn	Val	Arg	Thr	Ile	Ala	Arg
	130					135					140				
Asp	Ser	Leu	Ala	Arg	Ile	Pro	Leu	Leu	Glu	Lys	Leu	His	Leu	Asp	Asp
145					150					155					160
Asn	Ser	Val	Ser	Thr	Val	Ser	Ile	Glu	Glu	Asp	Ala	Phe	Ala	Asp	Ser
				165					170					175	
Lys	Gln	Leu	Lys	Leu	Leu	Phe	Leu	Ser	Arg	Asn	His	Leu	Ser	Ser	Ile
			180					185					190		
Pro	Ser	Gly	Leu	Pro	His	Thr	Leu	Glu	Glu	Leu	Arg	Leu	Asp	Asp	Asn
		195					200					205			
Arg	Ile	Ser	Thr	Ile	Pro	Leu	His	Ala	Phe	Lys	Gly	Leu	Asn	Ser	Leu
	210					215					220				
Arg	Arg	Leu	Val	Leu	Asp	Gly	Asn	Leu	Leu	Ala	Asn	Gln	Arg	Ile	Ala
225					230					235					240
Asp	Asp	Thr	Phe	Ser	Arg	Leu	Gln	Asn	Leu	Thr	Glu	Leu	Ser	Leu	Val
				245					250					255	
Arg	Asn	Ser	Leu	Ala	Ala	Pro	Pro	Leu	Asn	Leu	Pro	Ser	Ala	His	Leu

260					265					270					
Gln	Lys	Leu	Tyr	Leu	Gln	Asp	Asn	Ala	Ile	Ser	His	Ile	Pro	Tyr	Asn
	275						280					285			
Thr	Leu	Ala	Lys	Met	Arg	Glu	Leu	Glu	Arg	Leu	Asp	Leu	Ser	Asn	Asn
	290					295					300				
Asn	Leu	Thr	Thr	Leu	Pro	Arg	Gly	Leu	Phe	Asp	Asp	Leu	Gly	Asn	Leu
305						310					315				320
Ala	Gln	Leu	Leu	Leu	Arg	Asn	Asn	Pro	Trp	Phe	Cys	Gly	Cys	Asn	Leu
				325					330					335	
Met	Trp	Leu	Arg	Asp	Trp	Val	Lys	Ala	Arg	Ala	Ala	Val	Val	Asn	Val
			340					345					350		
Arg	Gly	Leu	Met	Cys	Gln	Gly	Pro	Glu	Lys	Val	Arg	Gly	Met	Ala	Ile
	355						360					365			
Lys	Asp	Ile	Thr	Ser	Glu	Met	Asp	Glu	Cys	Phe	Glu	Thr	Gly	Pro	Gln
	370					375					380				
Gly	Gly	Val	Ala	Asn	Ala	Ala	Ala	Lys	Thr	Thr	Ala	Ser	Asn	His	Ala
385						390					395				400
Ser	Ala	Thr	Thr	Pro	Gln	Gly	Ser	Leu	Phe	Thr	Leu	Lys	Ala	Lys	Arg
				405					410					415	
Pro	Gly	Leu	Arg	Leu	Pro	Asp	Ser	Asn	Ile	Asp	Tyr	Pro	Met	Ala	Thr
			420					425					430		
Gly	Asp	Gly	Ala	Lys	Thr	Leu	Ala	Ile	His	Val	Lys	Ala	Leu	Thr	Ala
	435						440					445			
Asp	Ser	Ile	Arg	Ile	Thr	Trp	Lys	Ala	Thr	Leu	Pro	Ala	Ser	Ser	Phe
	450					455					460				
Arg	Leu	Ser	Trp	Leu	Arg	Leu	Gly	His	Ser	Pro	Ala	Val	Gly	Ser	Ile
465						470					475				480
Thr	Glu	Thr	Leu	Val	Gln	Gly	Asp	Lys	Thr	Glu	Tyr	Leu	Leu	Thr	Ala
			485						490					495	
Leu	Glu	Pro	Lys	Ser	Thr	Tyr	Ile	Ile	Cys	Met	Val	Thr	Met	Glu	Thr
			500					505					510		
Ser	Asn	Ala	Tyr	Val	Ala	Asp	Glu	Thr	Pro	Val	Cys	Ala	Lys	Ala	Glu
	515						520					525			
Thr	Ala	Asp	Ser	Tyr	Gly	Pro	Thr	Thr	Thr	Leu	Asn	Gln	Glu	Gln	Asn
	530					535					540				
Ala	Gly	Pro	Met	Ala	Ser	Leu	Pro	Leu	Ala	Gly	Ile	Ile	Gly	Gly	Ala
545						550					555				560
Val	Ala	Leu	Val	Phe	Leu	Phe	Leu	Val	Leu	Gly	Ala	Ile	Cys	Trp	Tyr

565	570	575
Val His Gln Ala Gly Glu Leu Leu Thr Arg Glu Arg Ala Tyr Asn Arg		
580	585	590
Gly Ser Arg Glu Lys Asp Asp Tyr Met Glu Ser Gly Thr Lys Lys Asp		
595	600	605
Asn Ser Ile Leu Glu Ile Arg Gly Pro Gly Leu Gln Met Leu Pro Ile		
610	615	620
Asn Pro Tyr Arg Ala Lys Glu Glu Tyr Val Val His Thr Ile Phe Pro		
625	630	635
Ser Asn Gly Ser Ser Leu Cys Lys Ala Thr His Thr Ile Gly Tyr Gly		
645	650	655
Thr Thr Arg Gly Tyr Arg Asp Gly Gly Ile Pro Asp Ile Asp Tyr Ser		
660	665	670
Tyr Thr		

<210> 61
 <211> 246
 <212> PRT
 <213> Homo sapiens

<400> 61
Pro Met Ala Thr Gly Asp Gly Ala Lys Thr Leu Ala Ile His Val Lys
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Ala Leu Thr Ala Asp Ser Ile Arg Ile Thr Trp Lys Ala Thr Leu Pro
20 25 30
Ala Ser Ser Phe Arg Leu Ser Trp Leu Arg Leu Gly His Ser Pro Ala
35 40 45
Val Gly Ser Ile Thr Glu Thr Leu Val Gln Gly Asp Lys Thr Glu Tyr
50 55 60
Leu Leu Thr Ala Leu Glu Pro Lys Ser Thr Tyr Ile Ile Cys Met Val
65 70 75 80
Thr Met Glu Thr Ser Asn Ala Tyr Val Ala Asp Glu Thr Pro Val Cys
85 90 95
Ala Lys Ala Glu Thr Ala Asp Ser Tyr Gly Pro Thr Thr Thr Leu Asn
100 105 110
Gln Glu Gln Asn Ala Gly Pro Met Ala Ser Leu Pro Leu Ala Gly Ile
115 120 125
Ile Gly Gly Ala Val Ala Leu Val Phe Leu Phe Leu Val Leu Gly Ala
130 135 140

Ile Cys Trp Tyr Val His Gln Ala Gly Glu Leu Leu Thr Arg Glu Arg
 145 150 155 160
 Ala Tyr Asn Arg Gly Ser Arg Lys Lys Asp Asp Tyr Met Glu Ser Gly
 165 170 175
 Thr Lys Lys Asp Asn Ser Ile Leu Glu Ile Arg Gly Pro Gly Leu Gln
 180 185 190
 Met Leu Pro Ile Asn Pro Tyr Arg Ala Lys Glu Glu Tyr Val Val His
 195 200 205
 Thr Ile Phe Pro Ser Asn Gly Ser Ser Leu Cys Lys Ala Thr His Thr
 210 215 220
 Ile Gly Tyr Gly Thr Thr Arg Gly Tyr Arg Asp Gly Gly Ile Pro Asp
 225 230 235 240
 Ile Asp Tyr Ser Tyr Thr
 245

210> 62
 <211> 378
 <212> PRT
 <213> Homo sapiens

<400> 62
 Ile Ser Asn Asn Gln Leu Arg Met Leu Thr Gln Gly Val Phe Asp Asn
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 Leu Ser Asn Leu Lys Gln Leu Thr Ala Arg Asn Asn Pro Trp Phe Cys
 20 25 30
 Asp Cys Ser Ile Lys Trp Val Thr Glu Trp Leu Lys Tyr Ile Pro Ser
 35 40 45
 Ser Leu Asn Val Arg Gly Phe Met Cys Gln Gly Pro Glu Gln Val Arg
 50 55 60
 Gly Met Ala Val Arg Glu Leu Asn Met Asn Leu Leu Ser Cys Pro Thr
 65 70 75 80
 Thr Thr Pro Gly Leu Pro Leu Phe Thr Pro Ala Pro Ser Thr Ala Ser
 85 90 95
 Pro Thr Thr Gln Pro Pro Thr Leu Ser Ile Pro Asn Pro Ser Arg Ser
 100 105 110
 Tyr Thr Pro Pro Thr Pro Thr Thr Ser Lys Leu Pro Thr Ile Pro Asp
 115 120 125
 Trp Asp Gly Arg Glu Arg Val Thr Pro Pro Ile Ser Glu Arg Ile Gln
 130 135 140
 Leu Ser Ile His Phe Val Asn Asp Thr Ser Ile Gln Val Ser Trp Leu
 145 150 155 160

Ser Leu Phe Thr Val Met Ala Tyr Lys Leu Thr Trp Val Lys Met Gly
 165 170 175
 His Ser Leu Val Gly Gly Ile Val Gln Glu Arg Ile Val Ser Gly Glu
 180 185 190
 Lys Gln His Leu Ser Leu Val Asn Leu Glu Pro Arg Ser Thr Tyr Arg
 195 200 205
 Ile Cys Leu Val Pro Leu Asp Ala Phe Asn Tyr Arg Ala Val Glu Asp
 210 215 220
 Thr Ile Cys Ser Glu Ala Thr Thr His Ala Ser Tyr Leu Asn Asn Gly
 225 230 235 240
 Ser Asn Thr Ala Ser Ser His Glu Gln Thr Thr Ser His Ser Met Gly
 245 250 255
 Ser Pro Phe Leu Leu Ala Gly Leu Ile Gly Gly Ala Val Ile Phe Val
 260 265 270
 Leu Val Val Leu Leu Ser Val Phe Cys Trp His Met His Lys Lys Gly
 275 280 285
 Arg Tyr Thr Ser Gln Lys Trp Lys Tyr Asn Arg Gly Arg Arg Lys Asp
 290 295 300
 Asp Tyr Cys Glu Ala Gly Thr Lys Lys Asp Asn Ser Ile Leu Glu Met
 305 310 315 320
 Thr Glu Thr Ser Phe Gln Ile Val Ser Leu Asn Asn Asp Gln Leu Leu
 325 330 335
 Lys Gly Asp Phe Arg Leu Gln Pro Ile Tyr Thr Pro Asn Gly Gly Ile
 340 345 350
 Asn Tyr Thr Asp Cys His Ile Pro Asn Asn Met Arg Tyr Cys Asn Ser
 355 360 365
 Ser Val Pro Asp Leu Glu His Cys His Thr
 370 375

<210> 63
 <211> 338
 <212> PRT
 <213> Gallus gallus

<400> 63
 Val His Ser Val Trp Thr Arg Thr Val Arg Gln Val Tyr Asn Glu Leu
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 Asp Pro Glu His Trp Ser His Tyr Thr Phe Glu Cys Pro Gln Glu Cys
 20 25 30
 Phe Cys Pro Pro Ser Phe Pro Asn Ala Leu Tyr Cys Asp Asn Lys Gly

35					40					45						
Leu	Lys	Glu	Ile	Pro	Ala	Ile	Pro	Ala	Arg	Ile	Trp	Tyr	Leu	Tyr	Leu	
50					55					60						
Gln	Asn	Asn	Leu	Ile	Glu	Thr	Ile	Ser	Glu	Lys	Pro	Phe	Val	Asn	Ala	
65					70					75					80	
Thr	His	Leu	Arg	Trp	Ile	Asn	Leu	Asn	Lys	Asn	Lys	Ile	Thr	Asn	Asn	
85					90					95						
Gly	Ile	Glu	Ser	Gly	Val	Leu	Ser	Lys	Leu	Lys	Arg	Leu	Leu	Tyr	Leu	
100					105					110						
Phe	Leu	Glu	Asp	Asn	Glu	Leu	Glu	Glu	Val	Pro	Ala	Pro	Leu	Pro	Val	
115					120					125						
Gly	Leu	Glu	Gln	Leu	Arg	Leu	Ala	Arg	Asn	Lys	Ile	Ser	Arg	Ile	Pro	
130					135					140						
Glu	Gly	Val	Phe	Ser	Asn	Leu	Glu	Asn	Leu	Thr	Met	Leu	Asp	Leu	His	
145					150					155					160	
Gln	Asn	Asn	Leu	Leu	Asp	Ser	Ala	Leu	Gln	Ser	Asp	Thr	Phe	Gln	Gly	
165					170					175						
Leu	Asn	Ser	Leu	Met	Gln	Leu	Asn	Ile	Ala	Lys	Asn	Ser	Leu	Lys	Lys	
180					185					190						
Met	Pro	Leu	Ser	Ile	Pro	Ala	Asn	Thr	Leu	Gln	Leu	Phe	Leu	Asp	Asn	
195					200					205						
Asn	Ser	Ile	Glu	Val	Ile	Pro	Glu	Asn	Tyr	Phe	Ser	Ala	Ile	Pro	Lys	
210					215					220						
Val	Thr	Phe	Leu	Arg	Leu	Asn	Tyr	Asn	Lys	Leu	Ser	Asp	Asp	Gly	Ile	
225					230					235					240	
Pro	Pro	Asn	Gly	Phe	Asn	Val	Ser	Ser	Ile	Leu	Asp	Leu	Gln	Leu	Ser	
245					250					255						
His	Asn	Gln	Leu	Thr	Lys	Ile	Pro	Pro	Ile	Asn	Ala	His	Leu	Glu	His	
260					265					270						
Leu	His	Leu	Asp	His	Asn	Arg	Ile	Lys	Ser	Val	Asn	Gly	Thr	Gln	Ile	
275					280					285						
Cys	Pro	Val	Ser	Ile	Ala	Val	Ala	Glu	Asp	Tyr	Gly	Leu	Tyr	Gly	Asn	
290					295					300						
Ile	Pro	Arg	Leu	Arg	Tyr	Leu	Arg	Leu	Asp	Gly	Asn	Glu	Ile	Gln	Pro	
305					310					315					320	
Pro	Ile	Pro	Leu	Asp	Ile	Met	Ile	Cys	Phe	Gln	Leu	Leu	Gln	Ala	Val	
325					330					335						
Val Ile																

<210> 64
 <211> 326
 <212> PRT
 <213> Bos taurus

<400> 64
 Pro Tyr Glu Pro Tyr Pro Thr Gly Glu Glu Gly Pro Ala Tyr Ala Tyr
 1 5 10 15
 Gly Ser Pro Pro Gln Pro Glu Pro Arg Asp Cys Pro Gln Glu Cys Asp
 20 25 30
 Cys Pro Pro Asn Phe Pro Thr Ala Met Tyr Cys Asp Asn Arg Asn Leu
 35 40 45
 Lys Tyr Leu Pro Phe Val Pro Ser Arg Met Lys Tyr Val Tyr Phe Gln
 50 55 60
 Asn Asn Gln Ile Ser Ser Ile Gln Glu Gly Val Phe Asp Asn Ala Thr
 65 70 75 80
 Gly Leu Leu Trp Ile Ala Leu His Gly Asn Gln Ile Thr Ser Asp Lys
 85 90 95
 Val Gly Lys Lys Val Phe Ser Lys Leu Arg His Leu Glu Arg Leu Tyr
 100 105 110
 Leu Asp His Asn His Leu Thr Arg Ile Pro Ser Pro Leu Pro Arg Ser
 115 120 125
 Leu Arg Glu Leu His Leu Asp His Asn Gln Ile Ser Arg Val Pro Asn
 130 135 140
 Asn Ala Leu Glu Gly Leu Glu Asn Leu Thr Ala Leu Tyr Leu His His
 145 150 155 160
 Glu Ile Gln Glu Val Gly Ser Ser Met Lys Gly Leu Arg Ser Leu Ile
 165 170 175
 Leu Leu Asp Leu Ser Tyr Asn His Leu Arg Lys Val Pro Asp Gly Leu
 180 185 190
 Pro Ser Ala Leu Glu Gln Leu Tyr Leu Glu His Asn Asn Val Phe Ser
 195 200 205
 Val Pro Asp Ser Tyr Phe Arg Gly Ser Pro Lys Leu Leu Tyr Val Arg
 210 215 220
 Leu Ser His Asn Ser Leu Thr Asn Asn Gly Leu Ala Ser Asn Thr Phe
 225 230 235 240
 Asn Ser Ser Ser Leu Leu Glu Leu Asp Leu Ser Tyr Asn Gln Leu Gln
 245 250 255

Lys Ile Pro Pro Val Ser Thr Asn Leu Glu Asn Leu Tyr Leu Gln Gly
 260 265 270
 Asn Arg Ile Asn Glu Phe Ser Ile Ser Ser Phe Cys Thr Val Val Asp
 275 280 285
 Val Met Asn Phe Ser Lys Leu Gln Val Gln Arg Leu Asp Gly Asn Glu
 290 295 300
 Ile Lys Arg Ser Ala Met Pro Ala Asp Ala Pro Leu Cys Leu Arg Leu
 305 310 315 320
 Ala Ser Leu Ile Glu Ile
 325

<210> 65
 <211> 1020
 <212> DNA
 <213> Homo sapiens

<400> 65
 gcgcgcggcg aagtgaattt gctggacacg tcgaccatcc acggggactg gggctggctc 60
 acgtatccgg ctcattgggtg ggactccatc aacgaggtgg acgagtcctt ccagcccatc 120
 cacacgtacc aggtttgcaa cgtcatgagc cccaaccaga acaactggct gcgcacgagc 180
 tgggtccccc gagacggcgc ccggcgcgtc tatgctgaga tcaagtttac cctgcgcgac 240
 tgcaacagca tgcctggtgt gctgggcacc tgcaaggaga ccttcaacct ctactacctg 300
 gagtcggacc gcgacctggg ggccagcaca caagaaagcc agttcctcaa aatcgacacc 360
 attgcggcgg acgagagctt cacaggtgcc gaccttgggtg tgcggcgtct caagctcaac 420
 acggaggtgc gcagtgtggg tccccacagc aagcgcggct tctacctggc cttccaggac 480
 ataggtgcct gcctggccat cctctctctc cgcattctact ataagaagtg ccctgccatg 540
 gtgcgcaatc tggctgcctt ctcgaggcca gtgacggggg ccgactcgtc ctactgggtg 600
 gaggtgaggg gccagtgcgt gcggcactca gaggagcggg acacacccaa gatgtactgc 660
 agcgcggagg gcgagtggct cgtgcccacg ggcaaatgcg tgtgcagtgc cggctacgag 720
 gagcggcggg atgcctgtgt ggctgtgag ctgggcttct acaagtacgc ccctggggac 780
 cagctgtgtg cccgctgccc tccccacagc cactccgcag ctccagccgc ccaagcctgc 840
 cactgtgacc tcagctacta ccgtgcagcc ctggacccgc cgtcctcagc ctgcacccgg 900
 ccaccctcgg caccagtga cctgatctcc agtgtgaatg ggacatcagt gactctggag 960
 tgggccccct ccctggaccc aggtggcgcg agtgacatca cctacaatgc cgtgtgccgc 1020

<210> 66
 <211> 515
 <212> PRT
 <213> Homo sapiens

<400> 66
 Ala Arg Gly Glu Val Asn Leu Leu Asp Thr Ser Thr Ile His Gly Asp
 1 5 10 15
 Trp Gly Trp Leu Thr Tyr Pro Ala His Gly Trp Asp Ser Ile Asn Glu
 20 25 30
 Val Asp Glu Ser Phe Gln Pro Ile His Thr Tyr Gln Val Cys Asn Val
 35 40 45

Met Ser Pro Asn Gln Asn Asn Trp Leu Arg Thr Ser Trp Val Pro Arg
50 55 60
Asp Gly Ala Arg Arg Val Tyr Ala Glu Ile Lys Phe Thr Leu Arg Asp
65 70 75 80
Cys Asn Ser Met Pro Gly Val Leu Gly Thr Cys Lys Glu Thr Phe Asn
85 90 95
Leu Tyr Tyr Leu Glu Ser Asp Arg Asp Leu Gly Ala Ser Thr Gln Glu
100 105 110
Ser Gln Phe Leu Lys Ile Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr
115 120 125
Gly Ala Asp Leu Gly Val Arg Arg Leu Lys Leu Asn Thr Glu Val Arg
130 135 140
Ser Val Gly Pro Leu Ser Lys Arg Gly Phe Tyr Leu Ala Phe Gln Asp
145 150 155 160
Ile Gly Ala Cys Leu Ala Ile Leu Ser Leu Arg Ile Tyr Tyr Lys Lys
165 170 175
Cys Pro Ala Met Val Arg Asn Leu Ala Ala Phe Ser Glu Ala Val Thr
180 185 190
Gly Ala Asp Ser Ser Ser Leu Val Glu Val Arg Gly Gln Cys Val Arg
195 200 205
His Ser Glu Glu Arg Asp Thr Pro Lys Met Tyr Cys Ser Ala Glu Gly
210 215 220
Glu Trp Leu Val Pro Ile Gly Lys Cys Val Cys Ser Ala Gly Tyr Glu
225 230 235 240
Glu Arg Arg Asp Ala Cys Val Ala Cys Glu Leu Gly Phe Tyr Lys Ser
245 250 255
Ala Pro Gly Asp Gln Leu Cys Ala Arg Cys Pro Pro His Ser His Ser
260 265 270
Ala Ala Pro Ala Ala Gln Ala Cys His Cys Asp Leu Ser Tyr Tyr Arg
275 280 285
Ala Ala Leu Asp Pro Pro Ser Ser Ala Cys Thr Arg Pro Pro Ser Ala
290 295 300
Pro Val Asn Leu Ile Ser Ser Val Asn Gly Thr Ser Val Thr Leu Glu
305 310 315 320
Trp Ala Pro Pro Leu Asp Pro Gly Gly Arg Ser Asp Ile Thr Tyr Asn
325 330 335
Ala Val Cys Arg Arg Cys Pro Trp Ala Leu Ser Arg Cys Glu Ala Cys
340 345 350

Gly Ser Gly Thr Arg Phe Val Pro Gln Gln Thr Ser Leu Val Gln Ala
 355 360 365
 Ser Leu Leu Val Ala Asn Leu Leu Ala His Met Asn Tyr Ser Phe Trp
 370 375 380
 Ile Glu Ala Val Asn Gly Val Ser Asp Leu Ser Pro Glu Pro Arg Arg
 385 390 395 400
 Ala Ala Val Val Asn Ile Thr Thr Asn Gln Ala Ala Pro Ser Gln Val
 405 410 415
 Val Val Ile Arg Gln Glu Arg Ala Gly Gln Thr Ser Val Ser Leu Leu
 420 425 430
 Trp Gln Glu Pro Glu Gln Pro Asn Gly Ile Ile Leu Glu Tyr Glu Ile
 435 440 445
 Lys Tyr Tyr Glu Lys Asp Lys Glu Met Gln Ser Tyr Ser Thr Leu Lys
 450 455 460
 Ala Val Thr Thr Arg Ala Thr Val Ser Gly Leu Lys Pro Gly Thr Arg
 465 470 475 480
 Tyr Val Phe Gln Val Arg Ala Arg Thr Ser Ala Gly Cys Gly Arg Phe
 485 490 495
 Ser Gln Ala Met Glu Val Glu Thr Gly Lys Pro Arg Pro Arg Tyr Asp
 500 505 510
 Thr Arg Thr
 515

<210> 67
 <211> 1992
 <212> DNA
 <213> Homo sapiens

<400> 67
 atggtggtgg cacacccac cgccactgcc accaccacgc ccaactgccac tgtcacggcc 60
 accgtttgtga tgaccacggc caccatggac ctgcgggact ggctgttcct ctgctacggg 120
 ctcatcgctt tcctgacgga ggcatcgac agcaccacct gcccctcggt gtgcegtgc 180
 gacaacggct tcctctactg caacgaccgg ggactcacat ccatccccgc agatatccct 240
 gatgatgcca ccaccctcta cctgcagaac aaccagatca acaacgccgg catccccag 300
 gacctcaaga ccaaggtaa cgtgcaggtc atctacctat acgagaatga cctggatgag 360
 ttccccatca acctgccccg ctccctccgg gagctgcacc tgcaggacaa caatgtgcgc 420
 accattgcca gggactcgct ggcccgcatc ccgctgctgg agaagctgca cctggatgac 480
 aactccgtgt ccaccgtcag cattgaggag gacgccttcg ccgacagcaa acagctcaag 540
 ctgctcttcc tgagccggaa ccacctgagc agcatcccct cggggctgcc gcacacgtgc 600
 gaggagctgc ggctggatga caaccgcatc tccaccatcc cgctgcatgc cttcaagggc 660
 ctcaacagcc tgcggcgctt ggtgctggac ggtaacctgc tggccaacca gcgcatgcc 720
 gacgacacct tcagccgcct acagaacctc acagagctct cgctgggtgcg caattcgctg 780
 gccgcgccac ccctctacct gcaggacaat gccatcagcc acatccccta caacacgtgc 840
 gccaaagtgc gtgagctgga gcggctggac ctgtccaaca acaacctgac cacgtgccc 900
 cgcggcctgt tcgacgacct ggggaacctg gccagctgc tgctcaggaa caacccttgg 960
 ttttgtggct gcaacctcat gtggctgcgg gactgggtga aggcacgggc ggccgtggtc 1020

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aacgtgctggg gcctcatgtg ccagggccct gagaagggtcc ggggcatggc catcaaggac 1080
attaccagcg aggtggagag tgttttgaga cgggcgcgcg agggcggcgt ggccaatgcg 1140
gctgccaaga ccacggccag caaccacgcc tctgccacca cgccccaggg ttccctgttt 1200
accctcaagg ccaaaaggcc agggctgcgc ctccccgact ccaacattga ctaccccatg 1260
gccacgggtg atggcgccaa gacctggcc atccacgtga agggcctgac ggcagactcc 1320
atccgcatca cgtggaaggc cacgctcccc gcctcctctt tccggctcag ttggctgcgc 1380
ctgggccaca gccagccgt gggctccatc acggagacct tggcgcaggg ggacaagaca 1440
gagtacctgc tgacagccct ggagcccaag tccacctaca tcatctgcat ggtcaccatg 1500
gagaccagca atgcctacgt agctgatgag acaccctgtg gtgccaaggc agagacagcc 1560
gacagctatg gccctaccac cacactcaac caggagcaga acgctggccc catggcgagc 1620
ctgcccctgg cgggcatcat cggcggggca gtggctctgg tcttctctt cctgggtcctg 1680
ggggccatct gctggtacgt gcaccaggct ggcgagctgc tgacccgga gagggcctac 1740
aaccggggca gcaggaaaaa ggatgactat atggagtcag ggaccaagaa ggataactcc 1800
atcctggaag tccgcggccc tgggctgcag atgctgccc tcaaccgta ccgcgcaaaa 1860
gaagagtacg tggtcacac tatcttcccc tccaacggca gcagcctctg caaggccaca 1920
cacaccattg gctacggcac cacgcggggc taccgggacg gcggcatccc cgacatagac 1980
tactcctaca ca                                     1992

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<210> 68

<211> 664

<212> PRT

<213> Homo sapiens

<400> 68

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Met Val Val Ala His Pro Thr Ala Thr Ala Thr Thr Thr Pro Thr Ala
  1                      5                      10                      15

Thr Val Thr Ala Thr Val Val Met Thr Thr Ala Thr Met Asp Leu Arg
          20                      25                      30

Asp Trp Leu Phe Leu Cys Tyr Gly Leu Ile Ala Phe Leu Thr Glu Val
          35                      40                      45

Ile Asp Ser Thr Thr Cys Pro Ser Val Cys Arg Cys Asp Asn Gly Phe
          50                      55                      60

Ile Tyr Cys Asn Asp Arg Gly Leu Thr Ser Ile Pro Ala Asp Ile Pro
          65                      70                      75                      80

Asp Asp Ala Thr Thr Leu Tyr Leu Gln Asn Asn Gln Ile Asn Asn Ala
          85                      90                      95

Gly Ile Pro Gln Asp Leu Lys Thr Lys Val Asn Val Gln Val Ile Tyr
          100                     105                     110

Leu Tyr Glu Asn Asp Leu Asp Glu Phe Pro Ile Asn Leu Pro Arg Ser
          115                     120                     125

Leu Arg Glu Leu His Leu Gln Asp Asn Asn Val Arg Thr Ile Ala Arg
          130                     135                     140

Asp Ser Leu Ala Arg Ile Pro Leu Leu Glu Lys Leu His Leu Asp Asp
          145                     150                     155                     160

Asn Ser Val Ser Thr Val Ser Ile Glu Glu Asp Ala Phe Ala Asp Ser
          165                     170                     175

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Lys Gln Leu Lys Leu Leu Phe Leu Ser Arg Asn His Leu Ser Ser Ile
 180 185 190
 Pro Ser Gly Leu Pro His Thr Leu Glu Glu Leu Arg Leu Asp Asp Asn
 195 200 205
 Arg Ile Ser Thr Ile Pro Leu His Ala Phe Lys Gly Leu Asn Ser Leu
 210 215 220
 Arg Arg Leu Val Leu Asp Gly Asn Leu Leu Ala Asn Gln Arg Ile Ala
 225 230 235 240
 Asp Asp Thr Phe Ser Arg Leu Gln Asn Leu Thr Glu Leu Ser Leu Val
 245 250 255
 Arg Asn Ser Leu Ala Ala Pro Pro Leu Tyr Leu Gln Asp Asn Ala Ile
 260 265 270
 Ser His Ile Pro Tyr Asn Thr Leu Ala Lys Met Arg Glu Leu Glu Arg
 275 280 285
 Leu Asp Leu Ser Asn Asn Asn Leu Thr Thr Leu Pro Arg Gly Leu Phe
 290 295 300
 Asp Asp Leu Gly Asn Leu Ala Gln Leu Leu Leu Arg Asn Asn Pro Trp
 305 310 315 320
 Phe Cys Gly Cys Asn Leu Met Trp Leu Arg Asp Trp Val Lys Ala Arg
 325 330 335
 Ala Ala Val Val Asn Val Arg Gly Leu Met Cys Gln Gly Pro Glu Lys
 340 345 350
 Val Arg Gly Met Ala Ile Lys Asp Ile Thr Ser Glu Val Glu Ser Val
 355 360 365
 Leu Arg Arg Ala Pro Gln Gly Gly Val Ala Asn Ala Ala Ala Lys Thr
 370 375 380
 Thr Ala Ser Asn His Ala Ser Ala Thr Thr Pro Gln Gly Ser Leu Phe
 385 390 395 400
 Thr Leu Lys Ala Lys Arg Pro Gly Leu Arg Leu Pro Asp Ser Asn Ile
 405 410 415
 Asp Tyr Pro Met Ala Thr Gly Asp Gly Ala Lys Thr Leu Ala Ile His
 420 425 430
 Val Lys Ala Leu Thr Ala Asp Ser Ile Arg Ile Thr Trp Lys Ala Thr
 435 440 445
 Leu Pro Ala Ser Ser Phe Arg Leu Ser Trp Leu Arg Leu Gly His Ser
 450 455 460
 Pro Ala Val Gly Ser Ile Thr Glu Thr Leu Val Gln Gly Asp Lys Thr
 465 470 475 480

gcccgctctca aaacactctc catct

25

<210> 71

<211> 54

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 71

Asn Pro Phe Asn Cys Asp Cys Glu Leu Arg Trp Leu Leu Arg Trp Leu
1 5 10 15

Arg Glu Thr Asn Pro Arg Arg Leu Glu Asp Gln Glu Asp Leu Arg Cys
20 25 30

Ala Ser Pro Glu Ser Leu Arg Gly Gln Pro Leu Leu Glu Leu Leu Pro
35 40 45

Ser Asp Phe Ser Cys Pro
50

<210> 72

<211> 84

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:consensus
sequence

<400> 72

Pro Ser Ala Pro Thr Asn Leu Thr Val Thr Asp Val Thr Ser Thr Ser
1 5 10 15

Leu Thr Leu Ser Trp Ser Pro Pro Thr Gly Asn Gly Pro Ile Thr Gly
20 25 30

Tyr Glu Val Thr Tyr Arg Gln Pro Lys Asn Gly Gly Glu Trp Asn Glu
35 40 45

Leu Thr Val Pro Gly Thr Thr Thr Ser Tyr Thr Leu Thr Gly Leu Lys
50 55 60

Pro Gly Thr Glu Tyr Glu Val Arg Val Gln Ala Val Asn Gly Gly Gly
65 70 75 80

Gly Pro Glu Ser

<210> 73

<211> 23

<212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:consensus
 sequence

<400> 73
 Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
 1 5 10 15
 Gly Leu Phe Ser Asn Leu Pro
 20

<210> 74
 <211> 949
 <212> DNA
 <213> Homo sapiens

<400> 74
 atggtggtgg cacacccac cgccactgcc accaccacgc ccactgccac tgtcacggcc 60
 accgttgtga tgaccacggc caccatggac ctgcgggact ggctgttcct ctgctacggg 120
 ctcatcgcc tcttgacgga ggtcatcgac agcaccacct gccctcggt gtgccgctgc 180
 gacaacggct tcattactg caacgaccgg ggactcacat ccatccccgc agatatccct 240
 gatgacgcca ccaccctcta tctgcagaac aaccagatca acaacgctgg catccccag 300
 gacctcaaga ccaagggtcaa cgtgcaggtc atctacctat acgagaatga cctggatgag 360
 ttccccatca acctgccccg ctccctccgg gagctgcacc tgcaggacaa caatgtgcgc 420
 accattgcc gggactcgct ggcccgcac ccgctgctgg agaagctgca cctggatgac 480
 aactccgtgt ccaccgtcag cattgaggag gacgccttcg ccgacagcaa acagctcaag 540
 ctgctcttcc tgagccggaa ccacctgagc agcatccct cggggctgcc gcacacgctg 600
 gaggagctgc ggctggatga caaccgcac tccaccatcc cgctgcatgc cttcaagggc 660
 ctcaacagcc tgcggcgccct ggtgctggac ggtaacctgc tggccaacca gcgcatcgcc 720
 gacgacacct tcagccgcct acagaacctc acagagctct cgctgggtgcg caattcgctg 780
 gccgcgccac cctcaacct gcccagcgcc cacctgcaga aactctacct gcaggacaat 840
 gccatcagcc acatccccta caacacgctg gccaaagtgc gtgagctgga gcggctggac 900
 ctgtccaaca acaacctgac cacgctgccc cgcggcctgt tcgacgacc 949

<210> 75
 <211> 674
 <212> PRT
 <213> Homo sapiens

<400> 75
 Met Val Val Ala His Pro Thr Ala Thr Ala Thr Thr Thr Pro Thr Ala
 1 5 10 15
 Thr Val Thr Ala Thr Val Val Met Thr Thr Ala Thr Met Asp Leu Arg
 20 25 30
 Asp Trp Leu Phe Leu Cys Tyr Gly Leu Ile Ala Phe Leu Thr Glu Val
 35 40 45
 Ile Asp Ser Thr Thr Cys Pro Ser Val Cys Arg Cys Asp Asn Gly Phe
 50 55 60
 Ile Tyr Cys Asn Asp Arg Gly Leu Thr Ser Ile Pro Ala Asp Ile Pro

65					70						75				80
Asp	Asp	Ala	Thr	Thr	Leu	Tyr	Leu	Gln	Asn	Asn	Gln	Ile	Asn	Asn	Ala
				85					90					95	
Gly	Ile	Pro	Gln	Asp	Leu	Lys	Thr	Lys	Val	Asn	Val	Gln	Val	Ile	Tyr
			100					105					110		
Leu	Tyr	Glu	Asn	Asp	Leu	Asp	Glu	Phe	Pro	Ile	Asn	Leu	Pro	Arg	Ser
		115					120					125			
Leu	Arg	Glu	Leu	His	Leu	Gln	Asp	Asn	Asn	Val	Arg	Thr	Ile	Ala	Arg
	130					135					140				
Asp	Ser	Leu	Ala	Arg	Ile	Pro	Leu	Leu	Glu	Lys	Leu	His	Leu	Asp	Asp
145					150					155					160
Asn	Ser	Val	Ser	Thr	Val	Ser	Ile	Glu	Glu	Asp	Ala	Phe	Ala	Asp	Ser
				165					170					175	
Lys	Gln	Leu	Lys	Leu	Leu	Phe	Leu	Ser	Arg	Asn	His	Leu	Ser	Ser	Ile
			180					185					190		
Pro	Ser	Gly	Leu	Pro	His	Thr	Leu	Glu	Glu	Leu	Arg	Leu	Asp	Asp	Asn
		195					200					205			
Arg	Ile	Ser	Thr	Ile	Pro	Leu	His	Ala	Phe	Lys	Gly	Leu	Asn	Ser	Leu
	210					215					220				
Arg	Arg	Leu	Val	Leu	Asp	Gly	Asn	Leu	Leu	Ala	Asn	Gln	Arg	Ile	Ala
225					230					235					240
Asp	Asp	Thr	Phe	Ser	Arg	Leu	Gln	Asn	Leu	Thr	Glu	Leu	Ser	Leu	Val
				245					250					255	
Arg	Asn	Ser	Leu	Ala	Ala	Pro	Pro	Leu	Asn	Leu	Pro	Ser	Ala	His	Leu
			260					265					270		
Gln	Lys	Leu	Tyr	Leu	Gln	Asp	Asn	Ala	Ile	Ser	His	Ile	Pro	Tyr	Asn
		275					280					285			
Thr	Leu	Ala	Lys	Met	Arg	Glu	Leu	Glu	Arg	Leu	Asp	Leu	Ser	Asn	Asn
	290					295					300				
Asn	Leu	Thr	Thr	Leu	Pro	Arg	Gly	Leu	Phe	Asp	Asp	Leu	Gly	Asn	Leu
305					310					315					320
Ala	Gln	Leu	Leu	Leu	Arg	Asn	Asn	Pro	Trp	Phe	Cys	Gly	Cys	Asn	Leu
				325					330					335	
Met	Trp	Leu	Arg	Asp	Trp	Val	Lys	Ala	Arg	Ala	Ala	Val	Val	Asn	Val
			340					345						350	
Arg	Gly	Leu	Met	Cys	Gln	Gly	Pro	Glu	Lys	Val	Arg	Gly	Met	Ala	Ile
		355					360					365			
Lys	Asp	Ile	Thr	Ser	Glu	Met	Asp	Glu	Cys	Phe	Glu	Thr	Gly	Pro	Gln

370					375					380					
Gly	Gly	Val	Ala	Asn	Ala	Ala	Ala	Lys	Thr	Thr	Ala	Ser	Asn	His	Ala
385					390					395					400
Ser	Ala	Thr	Thr	Pro	Gln	Gly	Ser	Leu	Phe	Thr	Leu	Lys	Ala	Lys	Arg
				405					410					415	
Pro	Gly	Leu	Arg	Leu	Pro	Asp	Ser	Asn	Ile	Asp	Tyr	Pro	Met	Ala	Thr
			420					425					430		
Gly	Asp	Gly	Ala	Lys	Thr	Leu	Ala	Ile	His	Val	Lys	Ala	Leu	Thr	Ala
			435				440					445			
Asp	Ser	Ile	Arg	Ile	Thr	Trp	Lys	Ala	Thr	Leu	Pro	Ala	Ser	Ser	Phe
	450					455					460				
Arg	Leu	Ser	Trp	Leu	Arg	Leu	Gly	His	Ser	Pro	Ala	Val	Gly	Ser	Ile
465						470					475				480
Thr	Glu	Thr	Leu	Val	Gln	Gly	Asp	Lys	Thr	Glu	Tyr	Leu	Leu	Thr	Ala
				485					490					495	
Leu	Glu	Pro	Lys	Ser	Thr	Tyr	Ile	Ile	Cys	Met	Val	Thr	Met	Glu	Thr
			500					505					510		
Ser	Asn	Ala	Tyr	Val	Ala	Asp	Glu	Thr	Pro	Val	Cys	Ala	Lys	Ala	Glu
		515					520					525			
Thr	Ala	Asp	Ser	Tyr	Gly	Pro	Thr	Thr	Thr	Leu	Asn	Gln	Glu	Gln	Asn
	530					535					540				
Ala	Gly	Pro	Met	Ala	Ser	Leu	Pro	Leu	Ala	Gly	Ile	Ile	Gly	Gly	Ala
545						550					555				560
Val	Ala	Leu	Val	Phe	Leu	Phe	Leu	Val	Leu	Gly	Ala	Ile	Cys	Trp	Tyr
				565					570					575	
Val	His	Gln	Ala	Gly	Glu	Leu	Leu	Thr	Arg	Glu	Arg	Ala	Tyr	Asn	Arg
			580					585					590		
Gly	Ser	Arg	Glu	Lys	Asp	Asp	Tyr	Met	Glu	Ser	Gly	Thr	Lys	Lys	Asp
		595					600					605			
Asn	Ser	Ile	Leu	Glu	Ile	Arg	Gly	Pro	Gly	Leu	Gln	Met	Leu	Pro	Ile
	610					615					620				
Asn	Pro	Tyr	Arg	Ala	Lys	Glu	Glu	Tyr	Val	Val	His	Thr	Ile	Phe	Pro
625						630					635				640
Ser	Asn	Gly	Ser	Ser	Leu	Cys	Lys	Ala	Thr	His	Thr	Ile	Gly	Tyr	Gly
				645					650					655	
Thr	Thr	Arg	Gly	Tyr	Arg	Asp	Gly	Gly	Ile	Pro	Asp	Ile	Asp	Tyr	Ser
			660					665					670		
Tyr	Thr														

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sequence

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Ala Cys Pro Arg Glu Cys Thr Cys Ser Pro Phe Gly Leu Val Val Asp
1 5 10 15
Cys Ser Gly Arg Gly Leu Thr Leu Glu Val Pro Arg Asp Leu Pro
20 25 30

<210> 77
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sequence

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Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15
Gly Leu Phe Ser Asn Leu Pro
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<211> 23
<212> PRT
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sequence

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Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15
Gly Leu Phe Ser Asn Leu Pro
20

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<211> 23
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:consensus
sequence

<400> 79

Asn	Leu	Glu	Glu	Leu	Asp	Leu	Ser	Asn	Asn	Leu	Thr	Ser	Leu	Pro	Pro
1				5				10						15	

Gly	Leu	Phe	Ser	Asn	Leu	Pro
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Asn	Leu	Glu	Glu	Leu	Asp	Leu	Ser	Asn	Asn	Leu	Thr	Ser	Leu	Pro	Pro
1				5				10						15	

Gly	Leu	Phe	Ser	Asn	Leu	Pro
				20		

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<211> 23

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<223> Description of Artificial Sequence:consensus
sequence

<400> 81

Asn	Leu	Glu	Glu	Leu	Asp	Leu	Ser	Asn	Asn	Leu	Thr	Ser	Leu	Pro	Pro
1				5				10						15	

Gly	Leu	Phe	Ser	Asn	Leu	Pro
				20		

<210> 82

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:consensus
sequence

<400> 82

Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
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<210> 83

<211> 23

<212> PRT

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sequence

<400> 83

Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
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<210> 84

<211> 23

<212> PRT

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<223> Description of Artificial Sequence:consensus
sequence

<400> 84

Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
20